

THAT WHICH IS CLAIMED IS:

1. A telecommunications system, comprising:  
a passive optical network (PON) including an optical splitter configured to serve optical network terminations (ONTs) at respective ones of a plurality of  
5 subscriber premises; and  
an optical network unit (ONU) coupled to the PON and configured to provide communications for the plurality of the subscriber premises.
2. A system according to Claim 1, wherein the optical splitter directly  
10 subtends the ONU.
3. A system according to Claim 2, wherein the optical splitter and the ONU are co-located.
4. A system according to Claim 3, wherein the optical splitter and the  
15 ONU are positioned at a pedestal or pole.
5. A system according to Claim 1, wherein the ONU is powered by a power source a location remote from the ONU.  
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6. A system according to Claim 5, wherein a composite copper/fiber cable couples an optical line terminal (OLT) and the power source to the optical splitter and the ONU, respectively.
7. A system according to Claim 5, wherein a composite copper/fiber  
25 cable couples a host digital terminal (HDT) and the power source to the optical splitter and the ONU, respectively.
8. A system according to Claim 1, comprising a plurality of ONUs that  
30 provide communications to respective geographical clusters of subscriber premises, and wherein the PON comprises a plurality of optical splitters configured to serve ONTs at respective ones of the geographical clusters of subscriber premises and subtending the respective ONUs.

9. A system according to Claim 1:  
wherein the optical splitter interfaces a first optical fiber to a plurality of  
second optical fibers;  
wherein one of the second optical fibers directly connects the optical splitter to  
5 the ONU; and  
wherein at least one of the second optical fibers directly serves a subscriber  
premises of the plurality of subscriber premises.

10. A system according to Claim 9, wherein at least one of the second  
10 optical fibers serves a second optical splitter.

11. A system according to Claim 9, wherein at least one of the second  
optical fibers serves a second ONU that provides communications for a second  
plurality of subscriber premises.

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12. A system according to Claim 1:  
wherein the optical splitter interfaces a first optical fiber to a plurality of  
second optical fibers;  
wherein one of the second optical fibers directly connects the optical splitter to  
20 the ONU;  
wherein the optical splitter and the ONU are positioned at a pedestal; and  
wherein at least one of the second optical fibers comprises a buried fiber optic  
drop extending from the pedestal to an ONT at a subscriber premises.

25 13. A system according to Claim 1:  
wherein the optical splitter interfaces a first optical fiber to a plurality of  
second optical fibers;  
wherein one of the second optical fibers directly connects the optical splitter to  
the ONU;  
30 wherein the optical splitter and the ONU are positioned at a pedestal;  
wherein a buried composite cable carries at least one of the second optical  
fibers and at least one conductor from the ONU to a service drop location; and  
wherein the system further comprises:

a second optical splitter at the service drop location that interfaces the at least one of the second optical fibers to at least one fiber optic drop connected to an ONT at a subscriber premises; and

5 at least one conductor drop extending from the service drop location to the subscriber premises.

14. A system according to Claim 1:

wherein the optical splitter interfaces a first optical fiber to a plurality of second optical fibers;

10 wherein one of the second optical fibers directly connects the optical splitter to the ONU;

wherein the optical splitter and the ONU are positioned at a pedestal on a first side of a street;

15 wherein at least one of the second optical fibers and at least one conductor connected to the ONU serve subscriber premises on the first side of the street; and

wherein a buried composite cable carries at least one of the second optical fibers and at least one conductor connected to the ONU to a location on a second side of the street to serve subscriber premises on the second side of the street.

20 15. A system according to Claim 1:

wherein the optical splitter interfaces a first optical fiber to a plurality of second optical fibers;

wherein one of the second optical fibers directly connects the optical splitter to the ONU;

25 wherein the optical splitter and the ONU are positioned at a pole; and

wherein at least one of the second optical fibers comprises an aerial fiber optic drop extending from the pole to an ONT at a subscriber premises.

16. A system according to Claim 1:

30 wherein the optical splitter interfaces a first optical fiber to a plurality of second optical fibers;

wherein one of the second optical fibers directly connects the optical splitter to the ONU;

wherein the optical splitter and the ONU are positioned at a first pole; and

wherein an aerial composite cable carries at least one of the second optical fibers and at least one conductor from the ONU to a second pole; and

wherein the system further comprises:

5 a second optical splitter that is positioned at the second pole and that interfaces the at least one of the second optical fibers to at least one aerial fiber optic drop connected to an ONT at a subscriber premises; and  
at least one aerial conductor drop extending from the second pole to the subscriber premises.

10 17. A system according to Claim 1:

wherein the optical splitter interfaces a first optical fiber to a plurality of second optical fibers;

wherein one of the second optical fibers directly connects the optical splitter to the ONU;

15 wherein the optical splitter and the ONU are positioned at a pole on a first side of a street;

wherein at least one of the second optical fibers and at least one conductor connected to the ONU serve subscriber premises on the first side of the street;

20 wherein an aerial composite cable carries at least one of the second optical fibers and at least one conductor connected to the ONU to a second pole on the first side of the street; and

wherein the system further comprises:

25 a second optical splitter that is positioned at the second pole and that interfaces the at least one of the second optical fibers to aerial fiber optic drops to ONTs located at respective subscriber premises on the first side of the street and a second side of the street; and

a plurality of aerial conductor drops extending from the second pole to the subscriber premises on the first and second sides of the street.

30 18. A system according to Claim 1, wherein the OLT is located at one of a central office (CO) or a remote terminal (RT).

19. A system according to Claim 1, wherein the ONU is coupled to the OLT through a plurality of optical splitters.

20. A system according to Claim 1:  
wherein the optical splitter is configured to be coupled to a plurality of fiber optic drops that serve the plurality of subscriber premises;  
5 wherein the ONU is configured to be connected to a plurality of conductor drops that serve the plurality of subscriber premises; and  
wherein the OLT and the ONU are configured to provide a broadband service via the fiber optic drops and to provide a voice service and/or a data service via the conductor drops.
- 10 21. A telecommunications apparatus, comprising:  
an optical splitter configured to interface a first fiber of a PON to a plurality of second fibers; and  
an ONU co-located with the optical splitter, connected to one of the second  
15 optical fibers and configured to interface a plurality of conductive circuits to the one of the second fibers.
22. An apparatus according to Claim 21, wherein the optical splitter and the ONU are configured to be co-located at one of a pole or a pedestal.
- 20 23. An apparatus according to Claim 21, wherein the optical splitter and the ONU are respectively configured to receive the first fiber and a power conductor from a composite cable.
- 25 24. A method of providing communications services, the method comprising:  
serving ONTs located at respective ones of a plurality of subscriber premises with an optical splitter of a hierarchical passive optical network (PON); and  
providing communications via electrical media for the plurality of subscriber  
30 premises from an optical network unit (ONU) coupled to the PON.
25. A method according to Claim 24, comprising directly subtending the ONU from the optical splitter.

26. A method according to Claim 25, comprising co-locating the optical splitter and the ONU.

27. A method according to Claim 26, wherein co-locating the optical splitter and the ONU comprises positioning the optical splitter and the ONU at the same pedestal or pole.

28. A method according to Claim 24, further comprising powering the ONU from a power source at a location remote from the ONU.

29. A method according to Claim 24, further comprising:  
interfacing a first optical fiber to a plurality of second optical fibers at the optical splitter;  
directly connecting one of the second optical fibers to the ONU; and  
serving a subscriber premises of the plurality of subscriber premises with at least one of the second optical fibers.

30. A method according to Claim 29, further comprising directly connecting at least one of the second optical fibers to an ONT at a subscriber premises.

31. A method according to Claim 29, further comprising serving a second optical splitter with at least one of the second optical fibers.

32. A method according to Claim 29, further comprising serving at second ONU that provides communications for a second plurality of subscriber premises with at least one of the second optical fibers.

33. A method according to Claim 24, wherein the PON comprises one of an OLT or an HDT located at one of a central office (CO) or a remote terminal (RT).

34. A method according to Claim 24, wherein the ONU is coupled to one of an OLT or an HDT of the PON through a plurality of optical splitters.

35. A method according to Claim 24:
- wherein the optical splitter is configured to be coupled to a plurality of fiber optic drops to that serve the plurality of subscriber premises;
  - wherein the ONU is configured to be connected to a plurality of conductor
- 5 drops that serve the plurality of subscriber premises; and
- wherein the method further comprises:
    - providing a broadband service via the fiber optic drops; and
    - providing a voice service and/or a data service via the conductor drops.